

REMARKS- General

1. Any required formal drawing amendments will be filed after allowance.
2. The claims of record have all been rewritten and replaced with new claims 21 to 35 in order to define the invention more particularly over the cited references. These claims are all submitted to be patentable over the cited references because (1) they recite novel structure and thus distinguish physically over every reference (Sec. 102) and (2) the physical distinctions effect new and unexpected results thereby indicating that the physical distinctions are unobvious under Sec. 103.
3. Dependent and cancelled claims 2-4, 8-15 and 18 have been rewritten in independent form in new claims 21 to 35 to include the limitations of their respective base dependent claims and any intervening claims, hence, are submitted to be allowable because they adhere to the Allowable Subject Matter guidance of the Office Action Summary.

The Claims All Distinguish Over The References Under Sec. 102

4. The 3 independent claims, and hence all claims, distinguish over the reference under Sec. 102 because they recite (1) Claim 21- A top spindle for use with a single or plurality of rotational inertia members comprised of compact disc media storage disks to form a toy top assembly, said top spindle having a spindle axis, said rotational inertia member comprising a rigid disk having a mounting hub flange of a predetermined thickness and a central opening hole having a predetermined diameter, said compact disc providing means for electronically recording, storing or playing back audio, video, textual, computer code, gaming software or other mediums in digital form, wherein said top spindle comprises a spinning tip and a

threaded cylinder and a gripping stem, and (2) Claim 25- A top spindle comprising an assembly of at least two discrete parts and for use with a rotational inertia member comprised of a compact disc media storage disk to form a toy top assembly, said compact disc having a mounting hub flange of a predetermined thickness and a central opening hole having a predetermined diameter, said compact disc providing means for electronically recording, storing or playing back audio, video, textual, computer code, gaming software or other mediums in digital form, wherein said top spindle has a central axis and comprises a discrete spinning tip having a threaded cylinder and a discrete gripping stem having a threaded cylinder, and (3) Claim 35- A toy top comprising a top spindle having a spindle axis and a gripping stem and a spinning tip and a pair of shoulders associated therewith, said toy top designed especially for use with a single or plurality of rotational inertia members comprised of compact disc type media storage disks, said compact discs providing means for electronically recording, storing or playing back audio, video, textual, computer code, gaming software or other mediums in digital form, said rotational inertia member having a prescribed mounting hub flange thickness and a central opening hole, said rotational inertia member hub flange clamped between said shoulder pair, wherein said rotational inertia member includes a single or plurality of labels on which printed matter exists, said printed matter selected from the group consisting of images, patterns, pictures, logos, shapes, colors and text, said label fixedly attached to a planar surface of said rotational inertia member, wherein said printed matter comprises a curvilinear form, said curvilinear form tracing a path of the shadow projected by said spinning tip onto said label when said toy top is subjected to a light source following a prescribed arcuate path relative to said spindle axis, said curvilinear form providing means to fixedly orient the rotational position or angle of said toy top relative to an inertial earth reference and thereby providing means for said toy top to function as a navigational device.

5. The cited and relied upon under Sec. 102 Holenstein et al. shows a toy yo-yo comprising a spacer including a central axis or a threaded rod or a threaded pipe or a bolt, and two outer sidewalls, each outer sidewall having an attachment hub disposed thereon and two compact discs, each compact disc attached to one of the outer sidewalls, wherein said attachment hub may take the form of a compact disc clip or a generally cylindrically shaped body sized to snugly receive a central hole of a compact disc. The amended claims of the new invention do not include two outer sidewalls as found in Holenstein, but do include a spinning tip and a gripping stem and are operable with a single compact disc.
6. The cited, but not relied upon under Sec. 102, Heidenreich shows a toy top comprising a spindle having a pair of shoulders associated therewith, and a rigid disk, a covering for said disk on which advertising matter may be printed, and a transparent celluloid cover for said disk covering, all clamped between said shoulders. The amended claims of the present invention do not include a rigid disk or a transparent celluloid cover as found in Heidenreich, but do disclose a spindle for use with a compact disc forming a rotational inertia member and a threaded cylinder.
7. The cited, but not relied upon Under Sec. 102, Glickman shows a top spindle having a spindle axis and a spinning tip forming a lower end extremity and a support platform and a pair of drive lugs and a gripping stem having a maximum diameter less than said locating and retaining hub and a locating and retaining hub having an interference fit with a central opening hole of an inertia member and top spindle having a guide hub. The amended claims of the present invention do not include a pair of drive lugs or an interference fit with a central opening hole of an inertia member or a locating and retaining hub with gripping lands as found in Glickman, but do disclose a spindle for use with a compact disc forming a rotational inertia member and a threaded cylinder.

8. The cited, but not relied upon Under Sec. 102, Ray shows a pair of compact discs and a small diameter spacer and a tether. The amended claims of the present invention do not include a pair of compact discs or a small diameter spacer or a tether but do disclose a spinning tip and a threaded cylinder and a gripping stem for use with a compact disc.
9. The other cited but not relied upon patents are also deficient in one or more of the above-discussed physical features of the independent claims.
10. Since the independent claims all recite features which are not present in any reference, applicant submits that these claims, and hence all the dependent claims, clearly recite novel physical features which distinguish over any and all references under Sec. 102.

The Novel Physical Features Of The Claims Provide New And Unexpected Results And Hence Should Be Considered Unobvious, Making the Claims Patentable Under Sec. 103

11. Applicant submits the above-recited novel features in the independent claims, and hence in all claims, provide new and unexpected results and hence should be considered unobvious, making the claims patentable under Sec. 103.
12. Specifically, dependent Claims 2-4, 8-15 and 18 have been rewritten in independent form in new claims 21 to 35 to include the limitations of their respective base dependent claims and any intervening claims and are submitted to be allowable because they adhere to the Allowable Subject Matter guidance of the Office Action Summary.

Additional Reasons Militate In Favor Of Unobviousness

13. In addition to the above, applicant submits that additional reasons militate in favor of patentability as follows:

14. **Unexpected Results:** The use of compact discs mailed to the home or otherwise obtained to be made useful has been taught to include yo-yo's (Holenstein, Ray) and flying disks (Beged-Dov, McClung) and greetings (Ray), but has not been described to include a toy top as submitted in the present new invention. A toy top spins about an axis which is stationary in translation with respect to an earth reference. Yo-Yo's and flying disks have a spinning axis which must translate relative to an earth reference in order to function, hence, applicant submits that the results of the present invention are new and unexpected.

15. **Unappreciated Advantage:** The spindle of the present invention may be made in its entirety using a single lathe or screw machine tool. The rotational inertia member of the present invention is readily obtainable for free or for very low cost. The ease of manufacture, and hence the associated low cost, of the components for a Toy Top Spindle and Assembly Using Compact Discs of the present invention offers a commercial advantage that applicant submits has been unrecognized by any prior art heretofore.

16. **Lack of Implementation:** Low cost compact discs have been available to the public since their introduction in Europe and Japan in 1982 and in the United States in 1983. The spinning toy top has been known to mankind for thousands of years. It is submitted that if the combination of a compact disc with a spindle having the physical features described within the claims of the present invention to form a toy

top was obvious, then it would have already been invented by those skilled in the art within the 22 years since the widespread availability of compact discs.

The Dependent Claims Are A-fortiori Patentable

17. The dependent claims add additional novel features and thus are submitted to be, a-fortiori, patentable. For example, claim 22 recites a hub being dependent to base claim 21. Base claim 21 includes the features of cancelled dependent claim 2 and all of the limitations of cancelled base claim 1 per the guidance of the Office Action Summary. Hence, applicant submits that dependent claim 22 is patentable. By extension, the remaining dependent claims of the patent are also submitted to be patentable.

The Cited But Non-Applied References

18. The cited but non-applied references have been studied, but are submitted to be less relevant than the relied upon references.

Request for Constructive Assistance

The undersigned has made a diligent effort to amend the claims of this application. If for any reason the claims of this application are not believed to be in full condition for allowance, applicant respectfully requests the constructive assistance and suggestions of the Examiner in writing one or more acceptable claims pursuant to MPEP 707.07 (j) or in making constructive suggestions pursuant to MPEP 706.03 (d) in order that this application

can be placed in allowable condition as soon as possible and without the need for further proceedings.

Very respectfully,



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CERTIFICATE OF FAXING

I hereby Certify that this correspondence will be faxed to 703-872-9306 on the date below.

Date: 19Mar04

Inventors Signature:

